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**WE CLAIM:**

1. A sensor configured to determine a parameter of a flow of respiratory gas comprising:  
a temperature transducer, configured for positioning adjacent said flow of gas,  
a sensor housing configured to house said transducer and provide a substantial pathogen  
5 barrier to said flow of gas; and  
a conductive path between said transducer and said flow of gas.
2. A sensor according to claim 1 wherein said sensor housing has a locator to ensure said transducer is correctly positioned and/or aligned.
3. A sensor according to anyone of claims 1 or 2 wherein said sensor housing is integrally  
10 moulded in a gases conduit for conveying said flow of gas.
4. A sensor according to any one of claims 1 to 3 wherein said conductive path has a thermally conductive probe.
5. A sensor according to any of claims 1 to 4 wherein said conductive path crosses said flow of gas.
- 15 6. A sensor according to any one of claims 1 to 4 wherein said conductive path is a band that said flow of gas flows within.
7. A sensor according to claim 3 wherein said sensor housing is combined with an engagement for an electrical connection.
8. A sensor according to claim 7 wherein said engagement for an electrical connection  
20 comprises an electrical contact adapted to energise a heater wire for heating said conduit or the interior thereof.
9. A sensor according to any one of claims 1 to 8 wherein said sensor housing means has longitudinal axis substantially perpendicular to said flow of gas.
10. A system for conveying a flow of respiratory gas comprising:  
25 a conduit adapted to convey said flow of gases,  
a thermally conductive member extending from the interior of said conduit in contact with said flow of gas to the exterior of said conduit, and  
an external engagement for a temperature sensor engaging said member which does not protrude into said conduit.
- 30 11. A system for conveying a flow of respiratory gas according to claim 10 wherein said engagement for a temperature sensor is adapted to ensure intimate contact of said exterior portion

of said thermally conductive member and a temperature sensor.

12. A system for conveying a flow of respiratory gas according to claims 10 or 11 wherein said thermally conductive member comprises a thermally conductive housing.

13. A system for conveying a flow of respiratory gas according to claims 10 or 11 wherein said thermally conductive member comprises a thermally conductive probe.

14. A system for conveying a flow of respiratory gases according to claims 10 to 13 wherein said thermally conductive member comprises a conductive path that crosses the entire interior of said conduit.

15. A system for conveying a flow of respiratory gases according to any one of claims 10 to 13 wherein said thermal conductive member comprises a conductive band within the circumference of said conduit.

16. A system for conveying a flow of respiratory gases according to any one of claims 10 to 15 wherein said engagement for a temperature sensor is combined with an engagement for an electrical connection.

17. A system for conveying a flow of respiratory gases according to any one of claims 11 to 16 further comprising a temperature sensor housed within a sensor housing.

18. A system for conveying a flow of respiratory gases according to claims 17 wherein said sensor housing is combined with an engagement for an electrical connection.

19. A system for conveying a flow of respiratory gases according to claims 17 or 18 wherein said sensor housing means has longitudinal axis substantially perpendicular to said flow of gases.

20. A sensor as herein described with reference to the accompanying figures.

21. A system for conveying a flow of respiratory gases as herein described with reference to the accompanying figures.